



Hygienic Design

Standard Parts especially for the use in hygienically sensitive areas

Standard Parts. **Ganter.**

Standard Parts in Hygienic Design

Hygienic Design

Maximum hygiene is a fundamental requirement, not only where food is produced. Hygiene also plays an increasing role in other industrial areas, from the pharmaceutical industry to the manufacture of paints and dyes. Nowadays a major issue is the manufacture of products without added preservatives or with as few added preservatives as possible—while still achieving a long shelf life. However, this can only be achieved in a production environment in which all risks of contamination with microorganisms or dirt are excluded. For plant construction, this means that all components, elements, as well as surfaces, must be designed accordingly. Contaminants must not accumulate and must be easy to remove.

Ganter has solutions

Since even the smallest weak spots can contaminate entire production lines, Ganter decided to develop a special series of Standard Parts that meet the high requirements of the EHEDG and the 3-A Sanitary Standards, Inc.

The Hygienic Design product family

All Standard Parts of the “Hygienic Design” product family are labeled with the HD icon. They combine high surface quality, freedom from dead spaces, non-scooped outer surfaces, and sealed bolting areas. A sealing concept based on FEM calculations ensures reliable contact pressure after installation.

Hygienic Design also means that the time and material needed for regular cleaning is significantly reduced—which also noticeably lowers operating costs.



Standard Parts in Hygienic Design



GN 75.6
Waist shaped
Stainless Steel-Knobs
 with female thread
[Hygienic Design](#)
 Page 6



GN 75.6
Waist shaped
Stainless Steel-Knobs
 with threaded stud
[Hygienic Design](#)
 Page 7



GN 429
Stainless Steel-
Cabinet U-handles
[Hygienic Design](#)
 Page 8



GN 305
Adjustable
St. Steel-Hand levers
 with threaded bushing
[Hygienic Design](#)
 Page 10



GN 305
Adjustable
St. Steel-Hand levers
 with threaded stud
[Hygienic Design](#)
 Page 11



GN 5435
Stainless Steel-
Star knobs
[Hygienic Design](#)
 Page 12



GN 5445
Stainless Steel-
Three lobe knobs
[Hygienic Design](#)
 Page 13



GN 8170
Stainless Steel-
Indexing plungers
 Knob side in
[Hygienic Design](#)
 Page 14



GN 8170
Stainless Steel-
Indexing plungers
 Knob and pin side in
[Hygienic Design](#)
 Page 15



GN 1580
Stainless Steel-Nuts
[Hygienic Design](#)
 Page 16



GN 1580
Stainless Steel-Screws
[Hygienic Design](#)
 Page 17



GN 20
Stainless Steel-
Levelling feet
 without mounting holes
[Hygienic Design](#)
 Page 18



GN 20
Stainless Steel-
Levelling feet
 with mounting holes
[Hygienic Design](#)
 Page 19



GN 7600
Sealing rings
[Hygienic Design](#)
 Page 20

Why Hygienic Design?

In the food industry, medical technology and the pharmaceutical industry, product safety and consumer protection are becoming increasingly important. Due to their specific properties, standard parts in hygienic design can support the production process in these sensitive areas and facilitate the manufacture of products with a long shelf life, reducing the need for preservative agents.

Advantages of Hygienic Design

Less and shorter cleaning work (this can be up to 25% of the production time), therefore

- more time available for production
- less fresh water consumption
- lower energy consumption
- less cleaning agent required
- less production of waste water
- lower total costs and saving of resources

Legal basis of Hygienic Design

EN 1672-2:2009 “Food machinery”

Machines must be able to be cleaned, i.e. they must be designed and constructed so that dirt can be removed with the recommended cleaning methods.

Machinery directive 2006/42/EC

Machines must be designed so that

- materials can be easily and fully cleaned before each use and
- no risk of infections or illness is created.

DIN EN ISO 14519:2008-07

Hygiene requirements for the design of machines

DIN EN 1672:2009-07

Food machinery – General design principles – Part 2

Design requirements for Hygienic Design

Material

- Non-rusting Stainless Steels
- FDA and EU compliant plastics and elastomers

Surfaces

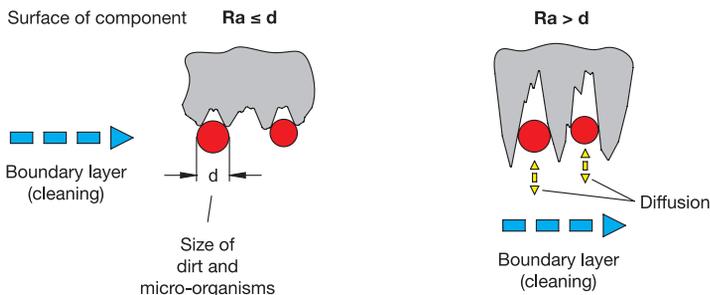
- Surfaces must be able to be cleaned
- Steps due to appliance configurations which are not aligned must be avoided
- Seals must be designed so that no gaps occur
- O-ring grooves must be hygienically designed
- Contact with the product to be manufactured must be ruled out
- Corners should preferably have a radius of 6 mm or more

Design / Geometry

The interior and exterior areas of all appliances, components or piping must be self-draining or be able to be drained and easy to clean.

Surface properties and roughness

Easy to clean with $Ra < 0.8 \mu\text{m}$



Design principles for Hygienic Design

EHEDG

- European Hygienic Engineering & Design Group
- non-profit European consortium of machine and food manufacturers as well their suppliers, research institutes, universities and government health agencies
- approximately 45 guidelines
- examination of products and issue of certificates

3-A Sanitary Standards, Inc.

- non profit and independent association in the USA
- three interest groups:
 - public and governmental health agencies, machine and food manufacturers
- over 70 Sanitary Standards
- examination of designs and processes, issue of certificates

Seals

For the standard parts which are listed in Hygienic Design, seals have the central function of protecting dead spaces, gaps and cracks from the penetration of cleaning fluids or product residues.

For this, a defined pre-tension or pressing of the seals and wipers is necessary for a reliable and permanent seal in the installed condition. Within the Hygienic Design product family, seal installation spaces and seal cross sections are calculated and designed with simulation software, so that the necessary surface compression is achieved on installation and the seal material is not subjected to excess pressure.

A fundamental differentiation can be made between static and moving seals:

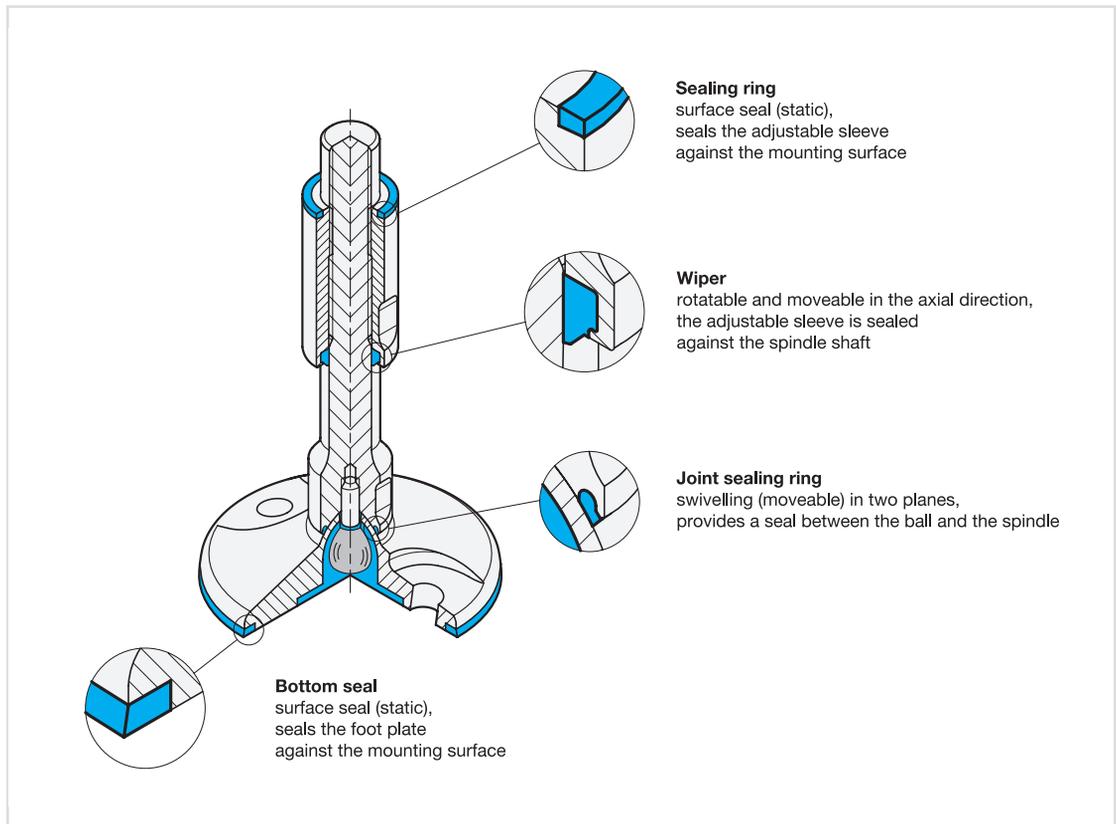
During assembly, the **static seals** in the design example shown below are tightened to the mounting surface at the top (**sealing ring**) and to the contact surface at the bottom (**bottom seal**). It should be ensured that all surfaces which make contact with the seal have a surface finish of at least R_a 0.8 μm .

The **moving seals** on the adjustable sleeve (**wiper**) and the ball joint (**joint sealing ring**) of the foot are designed so that they allow adjustment in both height and angle. With these too, the installation space together with the cross section of the seal ensures a gap-free, pre-tensioned seal.

Depending on the version and the type of use, it may be the case that seals may need to be replaced in case of damage or for preventative maintenance. For this, Ganter supplies the relevant seals as spare parts or offers these under **GN 7600** (\rightarrow Page 20) as standard parts.

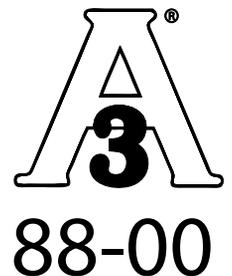
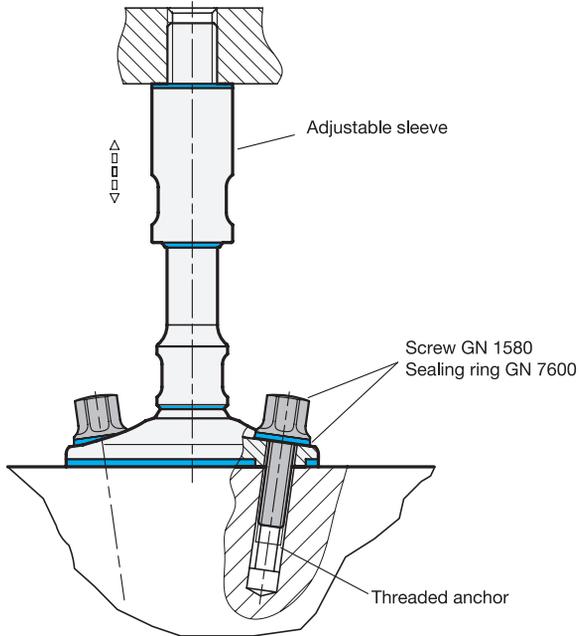
Application example

The illustrated design of the GN 20 Hygienic Design levelling foot shows how the various seal configurations are arranged.

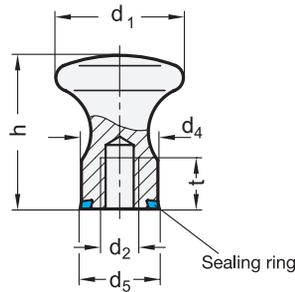


Principles

Mounting example, certification



Levelling foot [Hygienic Design](#) GN 20 with mounting holes → Page 19



3 Type
D with female thread

1 d_1	2 d_2	d_4	d_5	h	t min.
20	M 5	14	14,8	24	7
25	M 6	16	16,8	29	9
32	M 8	18	18,8	37	12

Specification

- Stainless Steel
 - AISI 316 L (A4)
 - matte ($Ra < 0,8 \mu m$) **MT**
 - polished ($Ra < 0,8 \mu m$) **PL**
- Sealing ring
 - Hydrogenated acrylonitrile butadiene rubber (H-NBR) **H**
 - blue
 - temperature resistant $-25 \text{ }^\circ\text{C}$ to $+150 \text{ }^\circ\text{C}$
 - Hardness 85 ± 5 Shore A
 - FDA compliant
- Elastomer characteristics
 - Main Catalogue Page 1483
- Stainless Steel characteristics
 - Main Catalogue Page 1489
- RoHS

Information

GN 75.6 waist shaped Stainless Steel-Knobs are intended for use in hygiene areas. The sealed mounting surface enables mounting without dead spaces; the impervious geometry in combination with the high quality finish prevents the accumulation of dirt and facilitates cleaning.

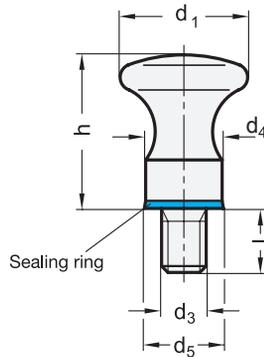
GN 75.6 waist shaped Stainless Steel-Knobs have a compact and timeless design.

see also...

- Sealing rings [Hygienic Design GN 7600](#) → Page 20

How to order	
1	d_1
2	d_2
3	Type
4	Finish
5	Material (Sealing ring)

GN 75.6-25-M6-D-PL-H



3 Type

E with threaded stud

1

2

d ₁	d ₃	d ₄	d ₅	h	Length l
20	M 5	14	14,8	24	10
25	M 6	16	16,8	29	12
32	M 8	18	18,8	37	14

Specification

4

5

- Stainless Steel
 - AISI 316 L (A4)
 - matte (Ra < 0,8 µm) **MT**
 - polished (Ra < 0,8 µm) **PL**
- Sealing ring
 - Hydrogenated acrylonitrile butadiene rubber (H-NBR) **H**
 - blue
 - temperature resistant -25 °C to +150 °C
 - Hardness 85 ±5 Shore A
 - FDA compliant
- Elastomer characteristics
 - Main Catalogue Page 1483
- Stainless Steel characteristics
 - Main Catalogue Page 1489
- RoHS

Information

GN 75.6 Waist shaped Stainless Steel-Knobs are intended for use in hygiene areas. The sealed mounting surface enables mounting without dead spaces; the impervious geometry in combination with the high quality finish prevents the accumulation of dirt and facilitates cleaning.

GN 75.6 Waist shaped Stainless Steel-Knobs have a compact and timeless design.

see also...

- Sealing rings [Hygienic Design GN 7600](#) → Page 20

How to order

1	d ₁
2	d ₃
3	Type
4	Finish
5	Material (Sealing ring)

GN 75.6-25-M6-E-MT-H

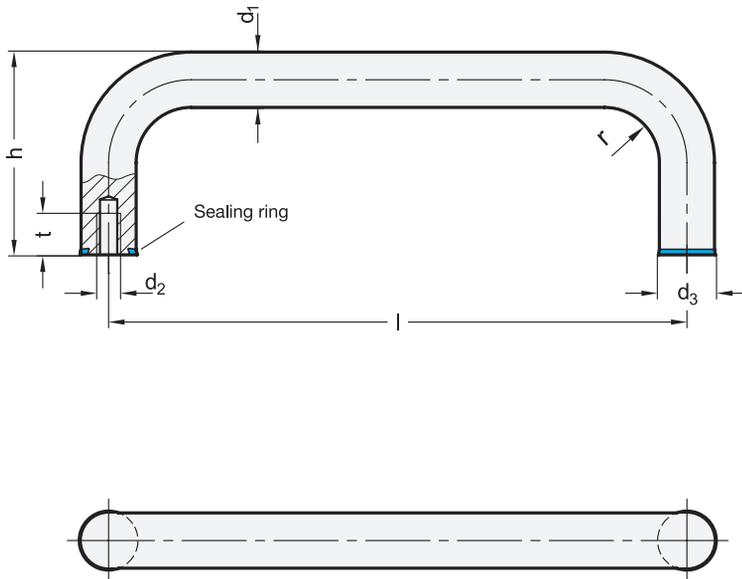
1

2

3

4

5



² d ₁	³ Length l ±0,5		d ₂	d ₃	h	r	t min.
12	125	160	M 5	12,8	51	14	12
16	160	200	M 6	16,8	59	18	12

Specification

- Stainless Steel
 - AISI 316 L **A4**
 - matte (Ra < 0.8 µm) **MT**
 - polished (Ra < 0.8 µm) **PL**
- Sealing rings
 - Hydrogenated acrylonitrile butadiene rubber (H-NBR)
 - blue
 - temperature resistant -25 °C to +150 °C
 - Hardness 85±5 Shore A
 - FDA compliant
- Elastomer characteristics
 - Main Catalogue Page 1483
- Stainless Steel characteristics
 - Main Catalogue Page 1489
- RoHS

Information

GN 429 Stainless Steel-Cabinet U-handles are intended for use in hygiene areas. The sealed mounting surfaces enable fastening without dead spaces. The high quality finish prevents adherence of dirt and facilitates cleaning.

Due to the manufacturing process, **special designs** can be supplied even in relatively small quantities.

In contrast to the MT finish, the PL finish is also certified according to the DGUV Test.

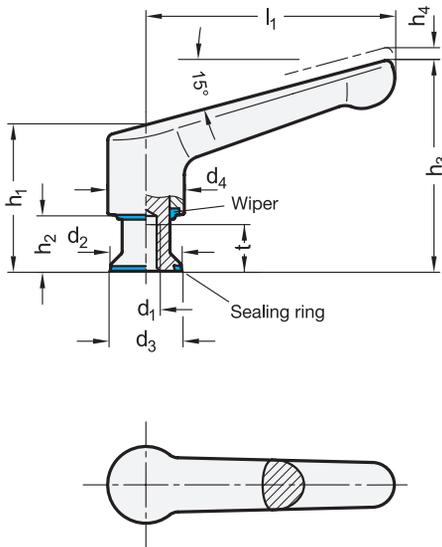
see also...

- Sealing rings [Hygienic Design GN 7600](#) → Page 20

How to order		1	Material
¹	²	2	d ₁
³	⁴	3	Length l
GN 429-A4-12-160-MT		4	Finish



Standard Parts in [Hygienic Design](#)



1

2

l_1	d_1	d_2	d_3	d_4	h_1	h_2	h_3	h_4 Stroke	t min.
63	M 6	14	14,8	19	43,8	16,3	60,1	2,5	10
63	M 8	18	18,8	19	45,8	18,3	62,1	2,5	12
78	M 8	18	18,8	24	49,3	16,5	69,3	3	12
78	M 10	22	22,8	24	51,3	18,5	71,3	3	15

Specification

3

4

- Handle
Stainless Steel precision casting
- AISI CF-8
- polished ($R_a < 0,8 \mu m$) **PL**
- Threaded bushing
Stainless Steel AISI 304
- Sealing ring / Wiper
Hydrogenated acrylonitrile butadiene rubber (H-NBR) **H**
- blue
- temperature resistant $-25 \text{ }^\circ\text{C}$ to $+150 \text{ }^\circ\text{C}$
- Hardness 85 ± 5 Shore A
- FDA compliant
- Elastomer characteristics
→ Main Catalogue Page 1483
- Stainless Steel characteristics
→ Main Catalogue Page 1489
- RoHS

Information

Adjustable Stainless Steel-Hand levers GN 305 with solid Stainless Steel-Handle are intended for use in hygiene areas. The sealed mounting surface enables fastening without dead spaces. The high quality finish as well as the impervious exterior surfaces prevent adherence of dirt and facilitate cleaning.

Adjustable hand levers are ideal whenever parts have to be clamped in a confined space or in a particular lever position.

The threaded insert is moveably attached to the handle with serrations. When pulling the handle, the serration frees itself and can be re-located into any required position. Engagement is achieved by releasing the lever.

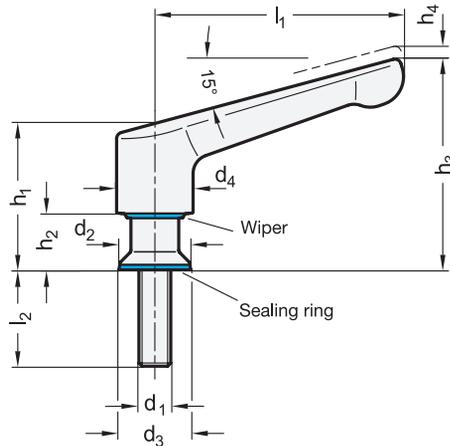
see also...

- Sealing rings [Hygienic Design GN 7600](#) → Page 20
- Stainless Steel-Star knobs [Hygienic Design GN 5435](#) → Page 12
- Stainless Steel-Three knob handles [Hygienic Design GN 5445](#) → Page 13

How to order

GN305-63-M8-PL-H

1	l_1
2	d_1
3	Finish
4	Material (Sealing ring)



1 2 3

l_1	d_1	l_2					d_2	d_3	d_4	h_1	h_2	h_3	h_4 Stroke
63	M 6	12	16	20	25	32	14	14,8	19	43,8	16,3	60,1	2,5
63	M 8	12	16	20	25	32	18	18,8	19	45,9	18,3	62,1	2,5
78	M 8	12	16	20	25	32	18	18,8	24	49,3	16,5	69,3	3
78	M 10	16	20	25	32	-	22	22,8	24	51,3	18,5	71,3	3

Specification

4 5

- Handle
Stainless Steel precision casting
- AISI CF-8
- polished ($R_a < 0,8 \mu m$) **PL**
- Threaded stud
Stainless Steel AISI 304
- Sealing ring / Wiper
Hydrogenated acrylonitrile butadiene rubber (H-NBR) **H**
- blue
- temperature resistant $-25 \text{ }^\circ\text{C}$ to $+150 \text{ }^\circ\text{C}$
- Hardness 85 ± 5 Shore A
- FDA compliant
- Elastomer characteristics
→ Main Catalogue Page 1483
- Stainless Steel characteristics
→ Main Catalogue Page 1489
- RoHS

Information

Adjustable Stainless Steel-Hand levers GN 305 with solid Stainless Steel-Handle are intended for use in hygiene areas. The sealed mounting surface enables fastening without dead spaces. The high quality finish as well as the impervious exterior surfaces prevent adherence of dirt and facilitate cleaning.

Adjustable hand levers are ideal whenever parts have to be clamped in a confined space or in a particular lever position.

The threaded insert is moveably attached to the handle with serrations. When pulling the handle, the serration frees itself and can be re-located into any required position. Engagement is achieved by releasing the lever.

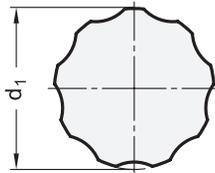
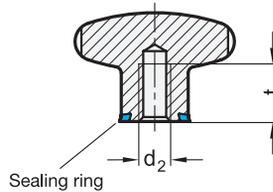
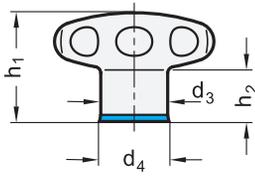
see also...

- Sealing rings [Hygienic Design GN 7600](#) → Page 20
- Stainless Steel-Star knobs [Hygienic Design GN 5435](#) → Page 12
- Stainless Steel-Three knob handles [Hygienic Design GN 5445](#) → Page 13

How to order

1	l_1
2	d_1
3	l_2
4	Finish
5	Material (Sealing ring)

1 2 3 4 5
GN305-78-M10-20-PL-H



1

2

d ₁	d ₂	d ₃	d ₄	h ₁	h ₂	t min.
40	M 6	18	18,8	30,5	15	12
40	M 8	18	18,8	30,5	15	15
50	M 8	21	21,8	34	17	15
50	M 10	21	21,8	34	17	18

Specification

3

4

- Stainless Steel
 - AISI 316 L (A4)
 - matte (Ra < 0,8 µm) **MT**
 - polished (Ra < 0,8 µm) **PL**
- Sealing ring
 - Hydrogenated acrylonitrile butadiene rubber (H-NBR) **H**
 - blue
 - temperature resistant -25 °C to +150 °C
 - Hardness 85±5 Shore A
 - FDA compliant
- Elastomer characteristics
 - Main Catalogue Page 1483
- Stainless Steel characteristics
 - Main Catalogue Page 1489
- RoHS

Information

GN 5435 Stainless Steel-Star knobs are intended for use in hygiene areas. The sealed mounting surface enables fastening without dead spaces. The high quality finish and the large corner radii prevent adherence of dirt and facilitate cleaning.

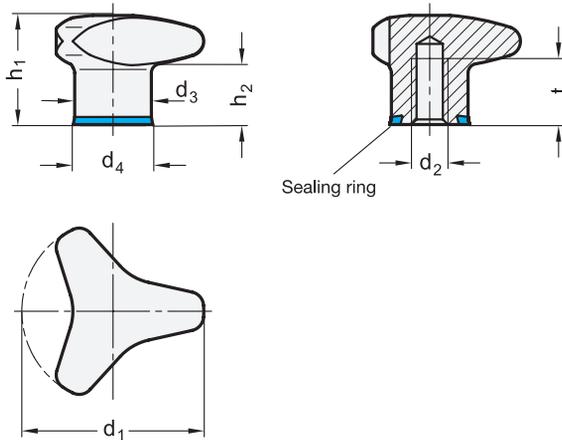
see also...

- Sealing rings [Hygienic Design GN 7600](#) → Page 20
- Adjustable Stainless Steel-Hand levers [Hygienic Design GN 305](#) → Page 10 / 11

How to order

1 2 3 4
GN 5435-40-M8-PL-H

1	d ₁
2	d ₂
3	Finish
4	Material (Sealing ring)



¹ d ₁	² d ₂	d ₃	d ₄	h ₁	h ₂	t min.
40	M 6	18	18,8	30,5	15	12
40	M 8	18	18,8	30,5	15	15
50	M 8	21	21,8	34	17	15
50	M 10	21	21,8	34	17	18

Specification

- Stainless Steel
 - AISI 316 L (A4)
 - matte (Ra < 0,8 µm) **MT**
 - polished (Ra < 0,8 µm) **PL**
- Sealing ring
 - Hydrogenated acrylonitrile butadiene rubber (H-NBR) **H**
 - blue
 - temperature resistant -25 °C to +150 °C
 - Hardness 85±5 Shore A
 - FDA compliant
- Elastomer characteristics
 - Main Catalogue Page 1483
- Stainless Steel characteristics
 - Main Catalogue Page 1489
- RoHS

Information

GN 5445 Stainless Steel-Three-lobe knobs are intended for use in hygiene areas. The sealed mounting surface enables fastening without dead spaces. The high quality finish as well as the large corner radii and closed surfaces prevent adherence of dirt and facilitate cleaning.

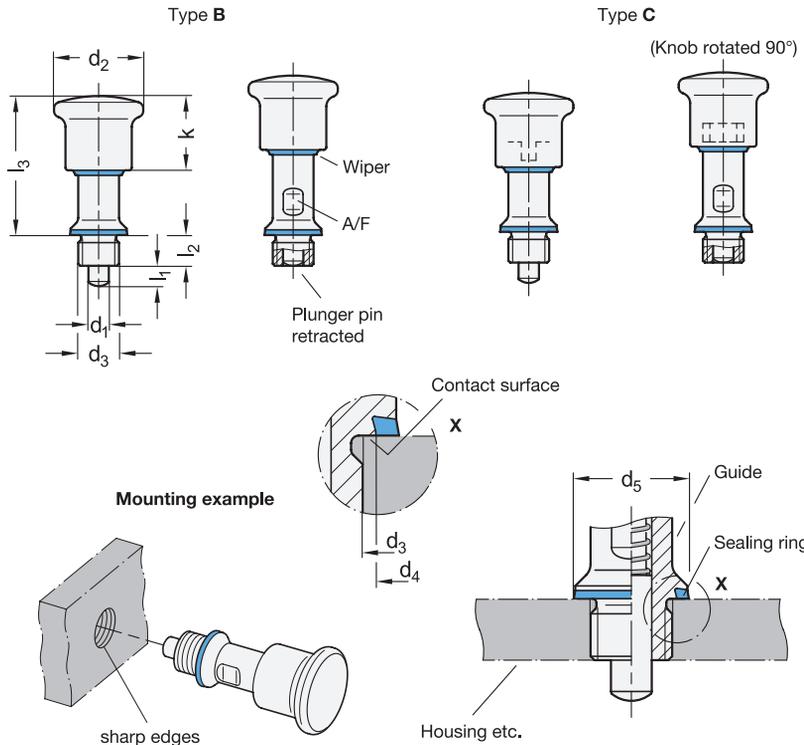
see also...

- Sealing rings [Hygienic Design GN 7600](#) → Page 20
- Adjustable Stainless Steel-Hand levers [Hygienic Design GN 305](#) → Page 10 / 11

How to order

GN 5445-40-M8-PL-H

¹	d ₁
²	d ₂
³	Finish
⁴	Material (Sealing ring)



2 Type

- B** without rest position
- C** with rest position

3 Identification

- FH** Knob side Hygienic Design (front hygiene)



d ₁ Plunger f8 Bore H8	d ₂	d ₃	d ₄	d ₅	l ₁	l ₂	l ₃	k	A/F	Spring load in N ≈	
										initial	end
6	35	M 12 x 1,5	18	22,8	6	12	49,8	29	14	20	36
8	35	M 16 x 1,5	18	22,8	8	12	54,3	29	14	22	32

Specification

- Stainless Steel
AISI 316 (A4)
Plunger pin case hardened
- Spring
Stainless Steel AISI 301
- Seals, blue, FDA compliant
temperature resistant -25 °C to +110 °C
- Sealing ring
H-NBR, hardness 85 ±5 Shore A
- Wiper
TPU, hardness 95 ±5 Shore A
- All moving parts lubricated with
FDA-compliant special grease
- *Load rating information* → Page 1463
- *ISO-Fundamental tolerances* → Page 1479
- *Elastomer characteristics* → Page 1483
- *Stainless Steel characteristics* → Page 1489
- RoHS

Information

Stainless Steel-Indexing plungers GN 8170 are intended for use in hygienic areas and meet hygiene requirements on the knob side (front hygiene). Wipers between the knob and the guide as well as the sealing ring between the guide and the housing keep the locking mechanism on the knob side leak-tight. At the same time, the high surface quality and dead-space-free mounting prevent dirt from adhering and facilitate cleaning.

Indexing plungers with a rest position (Type C) are used for such applications where the plunger has to stay in its retracted position. In that case, the knob is retracted and afterwards turned by 90°. A notch keeps the plunger in this position.

Mounting holes and through-holes in the housing must be at a right angle, free of burrs and without a chamfer. This ensures that the sealing rings will function properly.

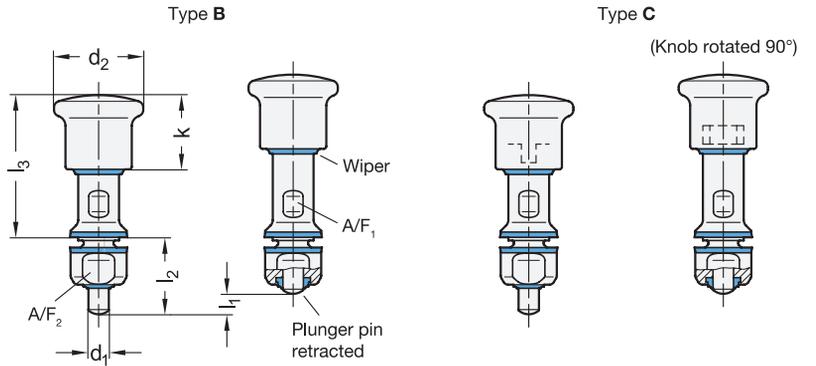
see also...

- *Sealing rings Hygienic Design GN 7600* → Page 20

How to order

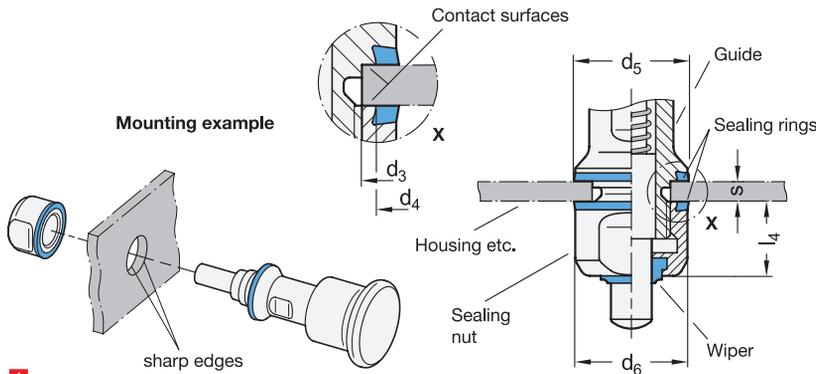
GN8170-8-C-FH

1	d ₁
2	Type
3	Identification



- 2 Type**
- B** without rest position
- C** with rest position

- 3 Identification**
- VH** Knob and pin side Hygienic Design (full hygiene)



d ₁ Plunger f8 Pin H8	d ₂	d ₃ -0,1	d ₄	d ₅	d ₆	l ₁	l ₂	l ₃	l ₄	k	s Clamping length		A/F ₁	A/F ₂	Spring load in N ≈	
											min.	max.			initial	end
6	35	16	18	22,8	22	6	27,5	50,5	14,5	29	1,5	4	14	18	20	36
8	35	16	18	22,8	22	8	29,5	55,5	14,5	29	1,5	4	14	18	22	32

Specification

- Stainless Steel
AISI 316 (A4)
Plunger pin case hardened
- Spring
Stainless Steel AISI 301
- Seals, blue, FDA compliant
temperature resistant -25 °C to +110 °C
- Sealing rings
H-NBR, hardness 85 ±5 Shore A
- Wiper
TPU, hardness 95 ±5 Shore A
- All moving parts lubricated with
FDA-compliant special grease
- *Load rating information* → Page 1463
- *ISO-Fundamental tolerances* → Page 1479
- *Elastomer characteristics* → Page 1483
- *Stainless Steel characteristics* → Page 1489
- RoHS

Information

Stainless Steel-Indexing plungers GN 8170 are intended for use in hygienic areas, and with their additional sealing nuts, they meet hygiene requirements on the knob and pin sides (complete hygiene). Wipers between knob and guide and between guide and pin as well as sealing rings on the guide and sealing nut keep the locking mechanism leak-tight. At the same time, the high surface quality and dead-space-free mounting prevent dirt from adhering and facilitate cleaning.

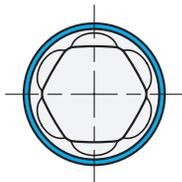
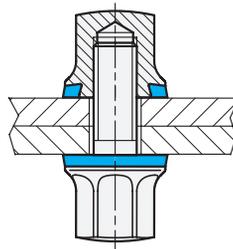
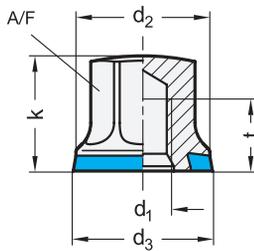
Indexing plungers with a rest position (Type C) are used for such applications where the plunger has to stay in its retracted position. In that case, the knob is retracted and afterwards turned by 90°. A notch keeps the plunger in this position.

Through-holes in the housing must be at a right angle, free of burrs and without a chamfer. This ensures that the sealing rings will function properly.

see also...

- *Sealing rings Hygienic Design* GN 7600 → Page 20

How to order GN8170-6-B-VH	1	d ₁
	2	Type
	3	Identification



d ₁	d ₂	d ₃	k	t min.	A/F
M 5	12	12,8	10	6	8
M 6	14	14,8	12	7,5	10
M 8	18	18,8	14,5	9,5	13
M 10	21	21,8	18	12	16

Specification

- Stainless Steel
 - AISI 316 L (A4)
 - matte (Ra < 0.8 µm)
 - polished (Ra < 0.8 µm)
- Sealing ring
 - Hydrogenated acrylonitrile butadiene rubber (H-NBR)
 - blue
 - temperature resistant -25 °C to +150 °C
 - Hardness 85±5 Shore A
 - FDA compliant



MT
PL

- EHEDG legal basis → Page 3
- Elastomer characteristics
→ Main Catalogue Page 1483
- Stainless Steel characteristics
→ Main Catalogue Page 1489
- RoHS

Information

GN 1580 Stainless Steel-Nuts are certified according to EHEDG guidelines and are therefore ideal for use in hygienic areas. The sealed mounting surface enables components to be mounted without dead spaces. The high quality finish as well as the large corner radii and closed surfaces prevent adherence of dirt and facilitate cleaning.

see also...

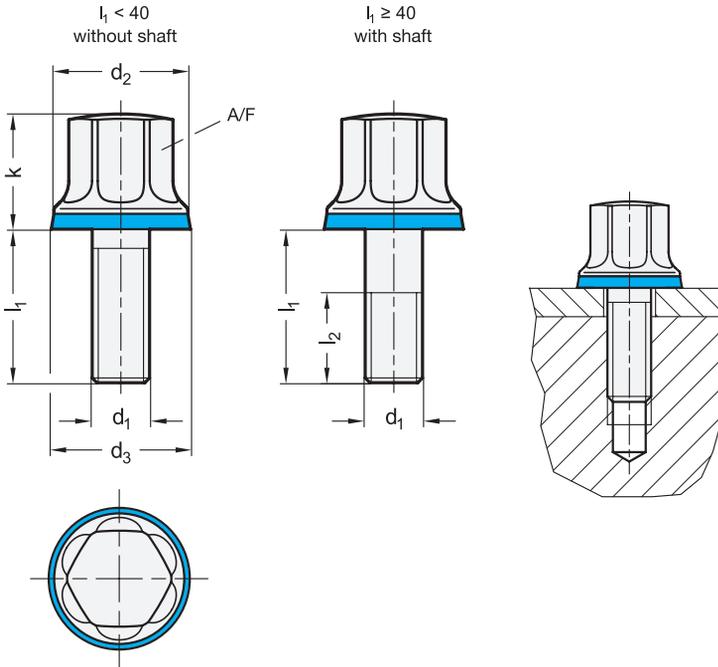
- Stainless Steel-Levelling feet [Hygienic Design GN 20](#) (with mounting holes) → Page 19
- Sealing rings [Hygienic Design GN 7600](#) → Page 20

How to order

GN 1580-M10-MT

1 d₁

2 Finish



d ₁	l ₁ < 40 without shaft				l ₁ ≥ 40 with shaft				d ₂	d ₃	k	l ₂	A/F
	1	2	3	4	5	6	7	8					
M 5	10	16	20	-	-	-	-	12	12,8	10	-	8	
M 6	12	16	20	25	30	-	-	14	14,8	12	-	10	
M 8	16	20	25	30	-	40	-	18	18,8	14,5	22	13	
M 10	20	25	30	-	-	40	50	21	21,8	18	26	16	

Specification

- Stainless Steel
 - AISI 316 L (A4)
 - matte (Ra < 0.8 µm)
 - polished (Ra < 0.8 µm)
- Sealing ring
 - Hydrogenated acrylonitrile butadiene rubber (H-NBR)
 - blue
 - temperature resistant -25 °C to +150 °C
 - Hardness 85±5 Shore A
 - FDA compliant

3

MT
PL

- EHEDG legal basis* → Page 3
- Elastomer characteristics*
→ Main Catalogue Page 1483
- Stainless Steel characteristics*
→ Main Catalogue Page 1489

• RoHS

Information

GN 1580 Stainless Steel-Screws are certified according to EHEDG guidelines and are therefore ideal for use in hygienic areas. The sealed mounting surface enables components to be mounted without dead spaces. The high quality finish as well as the large corner radii and closed surfaces prevent adherence of dirt and facilitate cleaning.

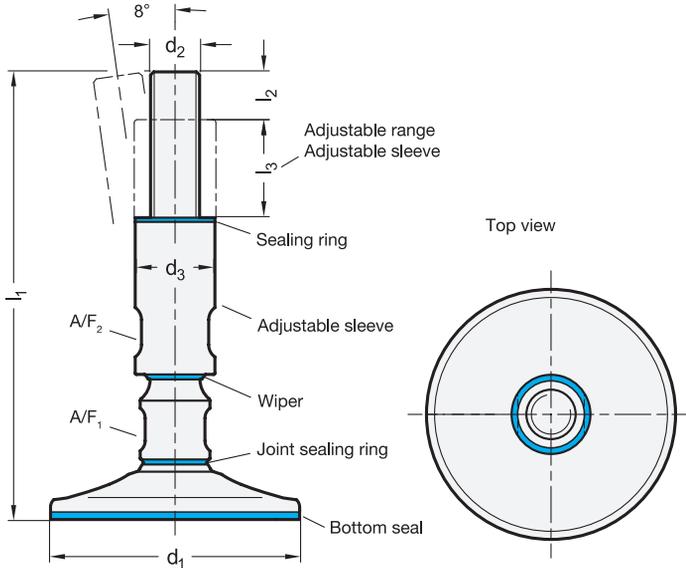
see also...

- Stainless Steel-Levelling feet *Hygienic Design* GN 20 (with mounting holes) → Page 19
- Sealing rings *Hygienic Design* GN 7600 → Page 20

How to order

GN1580-M10-50-PL

1	d ₁
2	l ₁
3	Finish



4 Type
A without mounting holes

1 2 3

d ₁	d ₂	l ₁	d ₃	l ₂	l ₃	A/F ₁	A/F ₂	Static load in kN (see information)	
80	M 16	175	225	28	19	35	18	22	30
80	M 20	185	235	32	24	35	24	27	47
80	M 24	185	235	36	29	35	24	30	67
100	M 16	175	225	28	19	35	18	22	30
100	M 20	185	235	32	24	35	24	27	47
100	M 24	185	235	36	29	35	24	30	67
120	M 16	175	225	28	19	35	18	22	30
120	M 20	185	235	32	24	35	24	27	47
120	M 24	185	235	36	29	35	24	30	67

Specification

- Spindle, adjustable sleeve, foot plate
 - Stainless Steel AISI 304
 - turned
- Seals, blue, FDA compliant
 - Sealing ring
NBR, hardness 70 ±5 Shore A
 - Wiper
TPU, hardness 95 ±5 Shore A
 - Joint sealing ring
H-NBR, hardness 85 ±5 Shore A
 - Bottom seal
Silicone, hardness 85 ±5 Shore A
- 3-A legal basis → Page 3
- Elastomer characteristics
→ Main Catalogue Page 1483
- Stainless Steel characteristics
→ Main Catalogue Page 1489
- RoHS

Information

GN 20 Stainless Steel-Levelling feet without mounting holes are certified according to 3-A Sanitary Standards, Inc. guidelines and are intended for use in hygienic areas.

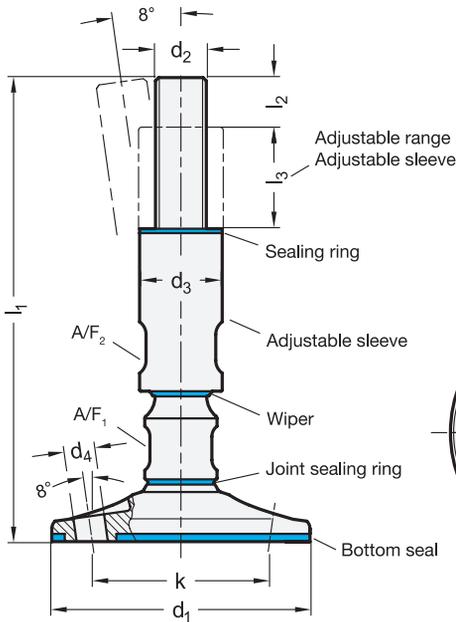
The bottom seal protects the area beneath the foot plate from dirt. For this, the foot must be pressed down by the weight of the machine. The sealing ring above the adjustment sleeve enables fastening without dead space. Due to the wiper or the ball seal, the moving components are sealed against the environment.

The high quality finish prevents adherence of dirt and facilitates cleaning.

The values listed in the table for static load capacity refer to a purely vertical load in relation to the levelling foot. Under normal operating conditions bending loads or angular loads are not uncommon and result in a reduction of load capacity, which must be taken into consideration.

How to order	1 d ₁
	2 d ₂
	3 l ₁
	4 Type

GN 20-100-M16-175-A



4 Type
B with mounting holes

1 d_1	2 d_2	3 l_1	d_3	d_4	l_2	l_3	k	A/F_1	A/F_2	Static load in kN (see information)	
100	M 16	175	225	28	12	19	35	69	18	22	30
100	M 20	185	235	32	12	24	35	69	24	27	47
100	M 24	185	235	36	12	29	35	69	24	30	67
120	M 16	175	225	28	12	19	35	89	18	22	30
120	M 20	185	235	32	12	24	35	89	24	27	47
120	M 24	185	235	36	12	29	35	89	24	30	67

Specification

- Spindle, adjustable sleeve, foot plate
 - Stainless Steel AISI 304
 - turned
- Seals, blue, FDA compliant
 - Sealing ring
NBR, hardness 70 ±5 Shore A
 - Wiper
TPU, hardness 95 ±5 Shore A
 - Joint sealing ring
H-NBR, hardness 85 ±5 Shore A
 - Bottom seal
Silicone, hardness 85 ±5 Shore A
- EHEDG and 3-A legal basis → Page 3
- Elastomer characteristics
→ Main Catalogue Page 1483
- Stainless Steel characteristics
→ Main Catalogue Page 1489
- RoHS

Information

GN 20 Stainless Steel-Levelling feet with mounting holes are certified according to EHEDG and 3-A Sanitary Standards, Inc. guidelines and are therefore ideal for use in hygienic areas.

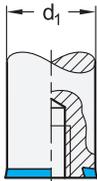
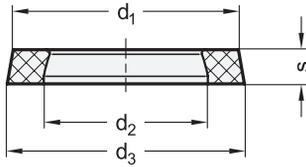
The bottom seal protects the area beneath the foot plate from dirt. For this, the foot must be screwed on using the mounting holes and compressed accordingly. Hygienic fastenings, e.g. GN 1580 screws and nuts, and the correct position of the mounting holes are essential. The sealing ring above the adjustment sleeve enables fastening without dead space. Due to the wiper or the ball seal, the moving components are sealed against the environment.

The high quality finish prevents adherence of dirt and facilitates cleaning.

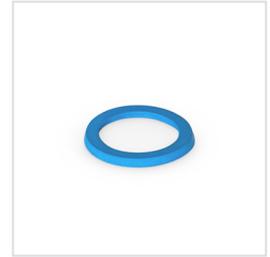
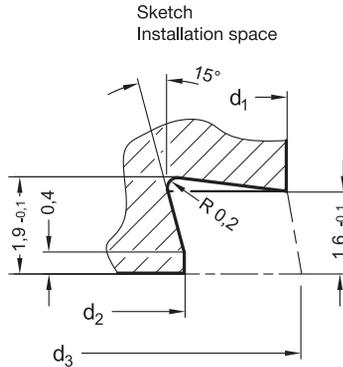
The values listed in the table for static load capacity refer to a purely vertical load in relation to the levelling foot. Under normal operating conditions bending loads or angular loads are not uncommon and result in a reduction of load capacity, which must be taken into consideration.

How to order	
1 d_1	
2 d_2	
3 l_1	
4 Type	

GN 20-120-M16-175-B



Application example



1 2 3

d ₁	d ₂	d ₃	s	d ₁	d ₂	d ₃	s	suitable for
Nominal dimensions - Installation space				Actual dimensions - Sealing rings				
11	7	11,8	1,6	10,25	6	11,35	2	-
12	8	12,8	1,6	11,25	7	12,35	2	GN 429 / GN 1580
13	9	13,8	1,6	12,25	8	13,35	2	-
14	10	14,8	1,6	13,25	9	14,35	2	GN 75.6 / GN 305 / GN 1580
16	12	16,8	1,6	15,25	11	16,35	2	GN 75.6 / GN 429
18	14	18,8	1,6	17,25	13	18,35	2	GN 75.6 / GN 305 / GN 1580 / GN 5435 / GN 5445
19	15	19,8	1,6	18,25	14	19,35	2	-
21	17	21,8	1,6	20,25	16	21,35	2	GN 1580 / GN 5435 / GN 5445
22	18	22,8	1,6	21,25	17	22,35	2	GN 305 / GN 8170
25	21	25,8	1,6	24,25	20	25,35	2	GN 1580
28	24	28,8	1,6	27,25	23	28,35	2	-
30	26	30,8	1,6	29,25	25	30,35	2	GN 20
32	28	32,8	1,6	31,25	27	32,35	2	GN 20 / GN 1580
34	30	34,8	1,6	33,25	29	34,35	2	-

Specification

4 5

- H-NBR **HNBR**
Hydrogenated acrylonitrile butadiene rubber
- blue
- temperature resistant -25 °C to +150 °C
- FDA compliant
- Hardness 85 ±5 Shore A **85**
- EPDM **EPDM**
Ethylene propylene diene rubber
- blue
- temperature resistant -40 °C to +120 °C
- FDA compliant
- Hardness 85 ±5 Shore A **85**
- *Elastomer characteristics*
→ Main Catalogue Page 1483
- RoHS

Information

Components with cylindrical mounting surfaces which are installed in hygiene areas can be sealed and mounted without dead spaces using GN 7600 sealing rings.

As delivered, or unassembled, the sealing rings have the “actual dimensions” as stated in the table. To ensure a firm seating and reliable sealing, an installation space must be provided in the component as shown in the diagram. This ensures that when the sealing ring is installed, it will be subject to the necessary pressure without excess load. All surfaces which are in contact with the sealing ring should have a minimum surface quality of Ra 0.8 µm.

Standard parts which are supplied with GN 7600 sealing rings are listed in the table and can be supplied individually in case service is required.

How to order

1	d ₁
2	d ₂
3	s
4	Material
5	Hardness

1 2 3 4 5
GN 7600-12-8-2-HNBR-85



HD
HYGIENIC
DESIGN

Otto Ganter GmbH & Co. KG

Triberger Straße 3
78120 Furtwangen
Germany

Tel. +49 7723 6507-0

Mail info@ganternorm.com

www.ganternorm.com